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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/941,661	08/30/2001	Stephen N. Cozzette	112898.1000	7077

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EXAMINER

CHIN, CHRISTOPHER L

ART UNIT PAPER NUMBER

1641

DATE MAILED: 05/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<p align="center"><b>Office Action Summary</b></p>	<p><b>Application No.</b></p> <p>09/941,661</p>	<p><b>Applicant(s)</b></p> <p>COZZETTE ET AL.</p>	
	<p><b>Examiner</b></p> <p>Christopher L. Chin</p>	<p><b>Art Unit</b></p> <p>1641</p>	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 March 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 144-151 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 144-147, 150 and 151 is/are rejected.
- 7) ☒ Claim(s) 148 and 149 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 144-147 and 150-151 are rejected under 35 U.S.C. 102(b) as being anticipated by Lowe et al for the reasons of record in the previous office action.

In response to this rejection, Applicants argue that the product-by-process language is critical to the success of the invention and should not be read out of the claim. A device formed by microdispensing a controlled volume of liquid is not functionally equivalent to a similar one made by the photolithographic methods of Lowe et al. Photolithography generally provides only for covalent means of attaching a ligand to a surface. This restricts surface coverage to essentially a monolayer of ligand. Such a thin coverage can provide insufficient ligand to generate a detectable signal at the sensor, and so impairs sensitivity of the device. Given the instability of many ligands disclosed by Lowe, a monolayer would limit the sensitivity (detection limit) of the device. Applicants go on to point out other deficiencies in Lowe and note the advantages of “microdispensing a controlled volume of liquid” over the photolithography methods used in Lowe.

Applicant's arguments have been considered but are not convincing. The instant invention is an array of biopolymers comprising one or more bioactive molecules. Each biolayer has a defined perimeter separate from each other biolayer in the array. The photolithography method taught by Lowe in making their array uses a mask or screen which results in defined biolayers separated from each other by defined perimeters. The areas of the silica substrate covered by the mask form a perimeter around each biolayer.

With respect to the product-by-process limitations, "[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). While the process in the instant claims is different from the photolithography method of Lowe, the instant claims do not recite any limitations (directly or implied) resulting from the process that would distinguish the product from the product in Lowe. The process limitation in claim 144 recites "microdispensing a controlled volume of liquid, including one or more bioactive molecules, onto a substantially planar surface". There is nothing in this microdispensing step that suggests a materially different product from that of Lowe. The product in Lowe meets all of the limitations recited in the instant claims that describe the claimed product.

With respect to the asserted deficiencies in the product of Lowe caused by the use of photolithography pointed out by Applicants, such assertions do not carry much weight, if any, since Applicants have not provided any experimental evidence to support these assertions. A side-by-side comparison would be appropriate to show that the claimed product is as superior to the product of Lowe as asserted by Applicants.

3. Claims 144-147 and 150-151 are rejected under 35 U.S.C. 102(b) as being anticipated by Chang.

Chang (US Patent 4,591,570) discloses a support with a defined array of antibody spots. The support is a flat planar surface. Antibodies in the spots are conjugated to the surface either covalently or non-covalently. The antibody spots are closely spaced but have a defined perimeter that separate them from each other (see the figures). Each spot is made up of antibodies of a single distinct specificity (col. 2, lines 44-68). The array of antibody spots are formed on the support by delivering microdroplets of antibodies with a micropipette in defined regions of the support. The micropipette should permit application of droplets to the support surface in precise positions to cover uniform areas of substantially the same size (col. 3, lines 31-55).

#### ***Allowable Subject Matter***

4. Claims 148-149 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher L. Chin whose telephone number is (571) 272-0815. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Long Le can be reached on (571) 272-0823. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 1641

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Christopher L. Chin  
Primary Examiner  
Art Unit 1641

5/15/05